REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-10 and 12-18 are pending in the present application. Claims 1, 4-8, and 12-15 are amended, Claim 11 is cancelled, and Claims 16-18 are added by the present amendment.

In the outstanding Office Action, Claims 1, 4, 5-7, 11, and 15 were rejected under 35 U.S.C. § 103(a) as unpatentable over Carlborg et al. (U.S. Patent Application Publication No. 2003/0078050, herein "Carlborg") in view of Amalfitano (U.S. Patent Application Publication No. 2001/0033557); Claims 3, 10, and 14 were rejected under 35 U.S.C. § 103(a) as unpatentable over Carlborg, Amalfitano and Lehtinen (U.S. Patent Application Publication No. 2003/0100269); Claims 2, 9, and 13 were rejected under 35 U.S.C. § 103(a) as unpatentable over Carlborg in view of Lehtinen; Claim 12 was rejected under 35 U.S.C. § 103(a) as unpatentable over Carlborg in view of Umeda et al. (U.S. Patent Application Publication No. 2001/0017882, herein "Umeda"); and Claim 8 was allowed.

Applicants thank the Examiner for the indication of allowable subject matter.

Regarding the outstanding rejections on the merits, independent Claim 11 is cancelled without prejudice and Claims 1, 4, and 15 are amended to more clearly recite that a base station sets not only a length of a reserved time for allocation of a resource, but also a start time of the reserved time, based on a priority level information in a reservation signal transmitted. The claim amendments find support in Figure 5 and its corresponding description in the specification, for example at page 14, lines 2-26. No new matter has been added. In addition, Claims 1, 4-8, and 12-15 are amended to not use means-plus-function language.

Briefly recapitulating, amended Claim 1 is directed to a resource allocating method in a radio packet communication system. The method includes, inter alia, transmitting a reservation signal from a mobile station to a base station, the reservation signal containing priority level information about a priority level of communication, and setting in the base station (i) a length of a reserved time for allocation of a resource, as a reserved time length, and (ii) a start time of the reserved time, based on the priority level information in the transmitted reservation signal.

In other words, the claimed method, as shown in Figure 5, determines not only a length of the reserved time but also the start time of the reserved time based on the priority level transmitted by the mobile station to the base station.

Turning to the applied art, Carlborg discloses a wireless communication system that exchanges data between a wireless network element 104 and a remote wireless unit 102, as shown in Figure 1. The remote wireless unit 102 sends a resource reservation request 122 to the wireless network element 104 and the wireless network element 104 sends back a reservation response 124 for reserving a time for communication with the remote wireless unit 102. Prior to the time for communication between the remote wireless unit 102 and the wireless network element 104, the wireless network element 104 sends a call-back notification signal 126 and the remote wireless unit 102 has the opportunity to send a call back response 128 to the wireless network element 104 to confirm that a communication will take place.

The resource reservation request 122 includes one or more interface resource reservation parameters 115, which are shown in Figure 5 of Carlborg as being a user ID, position data, bit rate, time, quality of service, and duration of call. However, Carlborg does not teach or suggest that the start time of the reserved time set by the base station is based on the priority level information in the reservation signal transmitted from the mobile station, as required by amended Claims 1, 4, and 15.

Carlborg discloses that a future time that is reserved by the wireless network element 104 for the remote wireless unit 102 is based on the air interface resource reservation parameters 115, one of which is priority data associated with a plurality of air interface resource reservation parameters (see Abstract). In this regard, Carlborg discloses in paragraph [0015], last five lines, that the priority data "associated with a plurality of air interface resource reservation parameters may include, for example, one or more data bits indicating which of the air interface resource reservation parameters receives priority in a renegotiation in the event of a conflict."

However, the priority data disclosed by Carlborg is indicative of which of the elements 500-510 shown in Figure 5 receives priority when there is a conflict and does not refer to the claimed priority level information for transmitting data. In other words, the priority data of Carlborg refers to the priority to be given to a set of parameters and not to the priority of data to be transmitted.

In addition, the priority data of Carlborg is stored in the memory 114 of the wireless network element 104 and not in the resource reservation request 122 transmitted by the remote wireless unit 102, as required by Claims 1, 4, and 15.

The outstanding Office Action recognizes that Carlborg does not teach or suggest a reserve time length setting step based on the priority level information and relies on Amalfitano for disclosing this feature. However, Amalfitano does not cure the deficiencies discussed above with regard to Carlborg, i.e., the base station that sets a start time of the reserved time based on the priority level information as required by amended Claims 1, 4, and 15. In addition, Amalfitano discloses allocating more resources to a priority user and less resources to a user who is not the priority user, i.e., a method that sets a priority level of the user. On the contrary, the claimed invention sets an allocable region corresponding to the priority level and a reserved time.

Accordingly, it is respectfully submitted that independent Claims 1, 4, and 15 and each of the claims depending therefrom patentably distinguish over Carlborg and Amalfitano, either alone or in combination.

Independent Claim 2 is directed to a resource allocating method in a radio packet communication system for transmission and reception of packet data by code division multiplexing between a base station and a mobile station. When the base station allocates a resource to the mobile station, the base station designates a spreading code to be allocated to the mobile station, for each reservation signal received from the mobile station.

The outstanding Office Action, recognizing that Carlborg does not teach or suggest the base station designating a spreading code to be allocated to a mobile station for each reservation signal, relies on Lehtinen for disclosing this feature. More specifically, the outstanding Office Action states in the paragraph bridging pages 11 and 12 that Lehtinen discloses a spreading code to be allocated to the mobile station in paragraph [0022].

Lehtinen describes a radio system having one or more network parts and one or more terminals and a network part being arranged to allocate a downlink transmission power in at least one timeslot to a given terminal from timeslots determined by a frame.[1]

Further, Lehtinen discloses in paragraph [0022] that when a terminal is within a coverage area of a base station and the terminal requests a data transfer connection or, alternatively, the base station requests connection set-up from the terminal, then two downlink data transfer resources are allocated and at least two time-dividedly spread data transfer resources are reserved for the terminal. Furthermore, Lehtinen discloses in the same paragraph that spreading codes are preferably allocated to different timeslots of the frame but may be in the same timeslot.

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[1] Lehtinen, see Abstract.

However, Lehtinen does not teach or suggest that a reservation signal is sent from a mobile station to a base station, and the base station designates a spreading code to be allocated to the mobile station, for ***each reservation signal*** as required by independent Claims 2, 9, and 13.

Accordingly, it is respectfully submitted that independent Claims 2, 9, and 13 and each of the claims depending therefrom patentably distinguish over Carlborg and Lehtinen, either alone or in combination.

Independent Claim 12 is directed to a mobile station having, *inter alia*, a reservation signal transmitting unit that transmits to a base station a reservation signal containing maximum transmit power information of the mobile station and transmit power information of the reservation signal.

The outstanding Office Action, acknowledging that Carlborg does not teach or suggest these features, relies on Umeda for teaching a reservation signal containing maximum transmit power information of the mobile station and transmitting power information of the reservation signal in paragraph [0019].

However, Umeda only discloses in paragraph [0019] that a carrier interference ratio of a radio channel is measured to determine a communications quality of the radio channel, a transmit power of a mobile station is controlled, and an information transmission bit rate is controlled in accordance with the control signal regarding the transmit power and the information transmission bit rate sent by the base station. Based on this information, the mobile station proposes to the base station that the information transmission bit rate is changed on the basis of a traffic of radio channels in use and information as to whether the transmit power of the mobile station has reached a maximum transmit power.

Although Umeda discloses that the mobile station determines information whether it has reached a maximum transmit power, Umeda does not teach or suggest that a reservation signal is transmitted from the mobile station to the base station and the reservation signal ***includes*** the maximum transmit power information of the mobile station and transmit power information regarding the reservation signal itself.

On the contrary, Umeda only discloses that the mobile station proposes to the base station to change the bit rate based on the information whether the transmit power of the mobile power has reached a maximum transmit power, i.e., the maximum transmit power is used by the mobile station to make the proposal to the base station and the maximum transmit power is not transmitted to the base station as required by independent Claim 12.

In addition, Applicants respectfully submit that there is no teaching or suggestion in Umeda about transmitting power information of the reservation signal within the reservation signal itself as required by independent Claim 12.

Accordingly, it is respectfully submitted that independent Claim 12 and each of the claims depending therefrom patentably distinguish over Carlborg and Umeda, either alone or in combination.

New Claims 16-18 are added to set forth the invention in a varying scope and Applicants respectfully submit that new Claims 16-18 are similar to Claims 1, 4, and 15 but recite various priority levels as disclosed in the specification at paragraph [0064]. No new matter has been added. Accordingly, it is respectfully requested these claims be allowed for the same reasons noted in regard to Claims 1, 4, and 15.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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